

# **Soil Erosion and Sediment Control Guidelines**

## **Stabilization Notes**

### **Erosion Control Blanket (ECB)**

Show erosion control blanket (ECB) on the detention basin side slopes, in areas of concentrated flow, and on other slopes greater than or equal to 4(H):1(V). Specify the type of ECB to be used in each area. ECB should be chosen based on slope, velocity, shear stress, and duration. Include Illinois Urban Manual Standard Drawing No. IL-530 (2 sheets).

### **Detention Basin Stabilization**

Priority shall be given to the completion and stabilization of the detention areas. Work in these areas shall not be prolonged in attempt that all final grading and stabilization can take place at one time.

### **General Stabilization**

In areas where work is complete, permanent stabilization shall occur within 7 days of completion, and in areas where work has temporarily ceased for 21 days or more, temporary stabilization shall occur by the 14th day after work has ceased.

### **Stockpile Stabilization**

Stockpiles of soil and other building materials to remain in place more than three (3) days shall be furnished with erosion and sediment control measures (i.e. perimeter silt fence). Stockpiles to remain in place for 30 days or more shall receive temporary seeding.

### **Stockpile Location**

Show the proposed location of any stockpiles. Stockpiles should be located in areas that do not have high potential for contributing sediments to stormwater facilities.

### **Soil stabilization chart**

Provide a soil stabilization chart for the project. The soil stabilization chart should include a calendar type chart with both temporary and permanent stabilization measures and each practice's applicable time of the year. Examples of temporary practices should include mulching and temporary seeding, and permanent practices should include permanent seeding, dormant seeding, sodding, etc. For each practice a minimum rate of application should be included as a part of the chart or a note in the chart. Seeding and mulching rates as well as the specifications of time of year of application and seeding plant species should be included and meet the minimum requirements of the Illinois Urban Manual.

### **Rock-lined Apron**

Add Rock Lined Apron (RLA) at the downstream end of all Flared End Sections on-site. Include a detail drawing for the rock lined aprons as found in the IUM standard for Pipe Outlet to Flat Area (IL-610). Show completed values for the rock sizing and apron dimensions based on the pipe sizing of the outlets as found in the IUM practice standard Code. 910.

## **Sediment Control Notes**

### **Curb Inlet Protection**

All drop inlets on and adjacent to the site must have a sediment trapping or containment device installed during construction activities.

### **Street Cleaning**

All adjacent streets must be kept clear of debris, inspected daily, and cleaned when necessary.

### **Temporary Sediment Storage Basin**

Address the issue of providing temporary sediment storage on-site during construction and grading activities. Show the locations of temporary sediment basins designed according to the Counties Technical Guidance Manual Section T300(e) (134 cubic yards per acre of disturbance). A maintenance schedule for these facilities shall also be included in the plans. If the permanent detention facilities are to be used for this purpose, please show: 1) the location of structures to prevent sediment from leaving the basin, such as the Sediment Basin Dewatering Device already detailed in the plans, 2) a maintenance schedule, and 3) a note stating that once the contributing area is stabilized, the basin needs to be cleaned out and the final proposed grade must be achieved.

### **Silt Fence at Top Slope of Detention Basins**

Show the installation of silt fence at the back of all lots that border stormwater facilities and drainageways. The silt fence should be located between the seeded and blanketed areas of the basin slopes and the building pads/lots. Silt fence is to be installed following the completion and stabilization of the stormwater facilities and is to remain in place until the contributing area is stabilized.

## **General Notes**

### **Weekly Inspections**

All erosion control measures must be inspected weekly and after each ½" rain event.

### **Dewatering**

During dewatering operations, water will be pumped into sediment basins or silt traps. Dewatering into drain tiles is strictly prohibited.

### **Construction Entrance**

Utilize the stabilized construction entrance detail within the IUM Standard Drawing No. IL-630 (2 sheets) along with completed values

### **No Use of Straw Bales**

Replace any reference to the use of straw bales with the use of alternative measures. For area drain inlet protection, see Illinois Urban Manual Standard Drawing No. IL-560 or attached detail for a possible method. Rock check dams (IUM Standard Dwg. No. IL-605CA or IL-605R), sediment logs, or geotextile-encased urethane foam products are recommended for ditch checks. Straw bales are typically not installed correctly and can lead to additional erosion and sedimentation problems.

### **Temp Diversion Swale**

Address the issue of redirecting flow from existing drainage swales onsite while the construction of the proposed BMP swales is taking place. Show the location of temporary diversion channels on the plan set. If necessary BMP swales can be used to redirect flows while remaining portions of the BMP swale construction is taking place.

- BMP swales must be constructed and stabilized before redirecting water flow into the channel. The preferred method of temporary channel stabilization is a riprap lined swale with underlying filter fabric or plastic sheeting (See Illinois Urban Manual Standard No. 980 and Standard Drawing No. IL-680R for guidance).
- Show silt fence protecting all diversion channels from receiving runoff from surrounding areas. Add label stating that this silt fence is to be installed prior to diversion of the creek.
- Add note stating that the CORPS must be contacted prior to diversion of the swale to examine the stability of the diversion channels and receiving ponds or wetlands.

- Add note stating that: "Prior to the release of the creek flow into newly created channel, the channel bottom and banks must be adequately stabilized with vegetation or a pre-approved alternative measure to withstand the erosive forces of the original creek flow. A meeting with the USACE shall be held prior to any creek releases to determine the readiness of the creek".
- Contact the Corps project manager with any question regarding the construction and/or sequencing of the diversion swale.

### **Winter shutdown**

The condition of the construction site for winter shutdown shall be addressed early in the fall growing season so that slopes and other bare earth areas may be stabilized with temporary and/or permanent vegetative cover for proper erosion and sediment control. All open areas that are to remain idle throughout the winter shall receive temporary erosion control measures including temporary seeding, mulching and/or erosion control blanket prior to the end of the fall growing season. The areas to be worked beyond the end of the growing season must incorporate soil stabilization measures that do not rely on vegetative cover such as erosion control blanket and heavy mulching".

## **In-stream or Stream-side Notes**

### **No Work in Flowing Water**

No work shall be performed in flowing water. Work in and near the critical areas should be isolated from concentrated flows or stream flow. Once work in this area begins, priority shall be given to the completion of the work and final stabilization of all disturbed areas.

### **Isolate Work Area**

All disturbed areas and work areas must be isolated from creek flows at all times. The diversion/isolation of the creek flows must be constructed from non-erodible materials. The Corps must be in agreement with overall method of diversion/isolation prior to the commencement of construction.

### **Work in Waterways**

Include a construction sequence for the placement of the culvert over the wetland area. This should include:

1. During work on the (banks) swale/river/stream/wetland, work must be timed to take place during low or no-flow conditions.
2. Concentrated flow must be isolated from the work area using a non-readable cofferdam (steel sheets, aqua barriers, etc.). Exact means and methods should be discussed during a scheduled pre-construction meeting.
3. If bypass is necessary, the inlet of the hose shall be placed a sump pit and the outlet placed on a non-readable, energy dissipating surface prior to rejoining the stream flow or wetland.
4. If dewatering the construction area is necessary, please be sure to filter all water by using filter bags or an alternative measure. Water must have sediment removed before being allowed to return to the original creek/stream/wetland/river
5. The side slopes must be reseeded and stabilized with an appropriate erosion control blanket prior to accepting flows. The bottom of the swale must be brought back to its original grade and stable enough to accept flows.

\*\*Information in this document is courtesy of the Kane/DuPage Soil And Water Conservation District (KDSWCD)